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ABSTRACT

Developments in telecommunications that are being used or could be used in education are reviewed, and the roles institutional researchers can play are explored. Possible roles cited include: identifying existing resources on campus, conducting market research on the needs of potential users, facilitating telecommunications planning efforts, keeping abreast of developments on other campuses and on cable franchising activity within the institution's service area. Examples are drawn from California State University, Los Angeles efforts. Examined are areas such as: the background of telecommunications, cable television franchising, instructional television fixed service (ITFS), teleconferencing, and combining internal communications. It is concluded that the vitality of an Office of Institutional Research is directly related to its ability to assist in helping an institution realize its potential, especially in areas such as telecommunications that present both challenges and potential. (Author/LC)

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TELECOMMUNICATIONS DEVELOPMENT: THE ROLE OF INSTITUTIONAL RESEARCH

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April 1983

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D. R. Coleman, Chairman
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Abstract

Emerging telecommunications technologies offer colleges and universities enormous potential to restructure and expand their roles. Some institutions are moving rapidly to combine to new technologies with their educational programs in novel ways. Several developments in telecommunications that are being used or could be used in education are reviewed, and the roles of Institutional Researchers in the telecommunications arena are explored.

Possible roles include: identifying existing resources on campus, conducting market research on the needs of potential users, facilitating telecommunications planning efforts, keeping abreast of developments on other campuses and on cable franchising activity within the institution's service area. Examples are drawn from California State University, Los Angeles efforts.

Background

The end of the 20th century has brought a revolution in the way people communicate: current technology allows electronic transmission of images, data, and words as well as voices from and to remote points. Employing recent developments in telecommunications is not only possible but is cost effective for educational institutions in many cases.

Some of the new technologies within reach are cable television, microwave transmission, computer sharing linkages, satellites,

Instructional Television Fixed Service (ITFS), teleconferencing, video discs and cassettes, low-power broadcasting, interactive video, and videotext. It is necessary for higher education, with its expressed mission to promote knowledge, to stay at the forefront in the transmission and delivery of knowledge if the academe is to thrive.

A significant number of institutions of higher education have not only already begun to explore using these technologies, but have begun to deliver services through telecommunications. For example, the Association for Higher Education of North Texas, which offers an educational television network, is the cooperative effort of 17 institutions of higher education in North Texas. The network is called TAGER[1] and has delivered hundreds of courses to member campuses, and corporate and business sites. A consortium of six California State University campuses has formed the Los Angeles Basin Extended Education Television Network.[2] And, many individual institutions own and operate television and radio stations. Also, the University of Quebec operates "Tele-universite" in Canada.

But, what is the role of the Institutional Researcher in the fast paced, high stakes game of telecommunications? In the following sections of this paper, several areas in which Institutional Researchers may become critically involved are explored. Some of the developments in telecommunications at California State University, Los Angeles and the California State University system

are also presented as they relate to the discussion.

Cable Television Franchising

Cable television is a growing industry. Years ago, this industry focused on smaller, rural areas having few or no local television stations and poor reception from nearby metropolitan areas. Large metropolitan areas did not "need" cable because they had several stations which were major network affiliates and the reception of these stations within these urban areas was good. With the development of satellite communication, the potential for cable has increased exponentially. Cable companies are able to offer their customers many more channels, including all-news, all-sports, and all-movie channels. It is not unusual for cable companies to offer over 100 channels in today's franchise bidding wars. Such remarkably expanded programming makes cable an attractive product even in urban areas where reception of the local stations is good. In fact, there are over 4,000 operating cable systems and 16 million subscribers in the US today.[3] Also, in 1972, the Federal Communications Commission (FCC), which regulates the cable industry, eased restrictions on cable, which originally protected the hold that local stations had on audiences.[4] Furthermore, in 1977, the Supreme Court struck down the FCC's access rules opening the path for rapid development. The access rules that were overturned have given preferential treatment to local programming and had the effect of blocking programming from distant stations.

These changes enabled cable companies to rapidly penetrate metropolitan markets. When cable companies do bid for municipal franchises, they attempt to present the most attractive package of services to the community. Such services may include "tiering" or multiple levels of service for subscribers, community access channels, interactive or two-way cable, and teletext, to name a few. It is in the provision of community access channels that institutions of higher education have the most to gain. Hospitals and educational institutions are often the prime beneficiaries of private cable company largess because these local organizations are in the best position (are best organized) to develop community programming. Cable companies typically agree to provide channels on the system to these organizations, and to provide studio equipment in order to develop the programming. Some agreements even include training on the equipment. The picture, however, is not always pretty:

> The current scramble for franchises to wire America's biggest cities for cable television is being compared with the rush for railway franchises in the last century. Corruption is rife. At best, city councils, who award the franchises, are making exorbitant demands of the bidders. The franchise-seeking cable television companies -- which now include some of the biggest corporate names in communications, publishing and banking -- are falling over each other to match the cities' demands with extravagant promises. Both sides sense that local monopoly rights to construct the urban information network of tomorrow may be at stake.[5]

In 1982, the Los Angeles Times reported the following tactics as

commonplace in the franchise bidding wars:

- Assigning at least one and sometimes two or three high-powered lobbyists to each council member...

- Recruiting community leaders as supporters by offering them company stock, usually at low rates. These so-called "rent-a-citizens" could make huge profits if their firm wins and they later sell their stock.

- Entertaining council members in posh restaurants, throwing gala receptions for the entire council and providing officials with Christmas gifts, tickets to plays and movies, private boxes at the racetrack and other favors.

- Offering money and television equipment to influential grass-roots groups in return for their endorsements.

Company spokesmen say that high-powered lobbying is a fact of life. "We have to do these things, to make these contributions.... It's just part of the process,"... [6]

Pretty or not, the stakes are high and the opportunity for educational institutions is real. For example, California State University, Los Angeles currently controls one and a half television channels on a cable system in its service area. It has also acquired a microwave uplink and has access to a 14 satellite receiving antenna on campus. Much of this equipment has been acquired through negotiations with a local cable company when it was seeking the cable franchise in the University's service area. Recently, millions of dollars worth of telecommunications equipment was given to colleges and universities in Boston as part of a cable company's bid to win the lucrative franchise in that area.

What are the chief benefits to an educational institution in becoming involved in a cable franchising agreement? First, the institution can receive channels on the cable system for delivery of its own programming. Second, it could receive studio equipment in order to professionally produce educational programming. Both of these benefits would provide a "shot in the arm" to the University's broadcasting department by increasing the hands-on experience of students majoring in the program. Third, the institution could increase its visibility in the service area by delivering programs to the community. Beyond the obvious station identification, the college could, for example, provide a master calendar of campus events for the public or appropriate teletext. But this is only a beginning. More in-depth discussions of the prospects of cable for higher education are readily available.[7]

It would be naive to say that there are no disadvantages: program production is extremely time consuming and expensive, unless students do most of the work as part of the class assignments. But this must be organized. Use of cable television for instruction is rarely preferable to live classrooms because the latter method affords interaction between students and faculty, whereas television is one-way. Also, trying to collect fees and tuition from subscribers who already have paid subscription fees would be an organizational nightmare. Still, the benefits to an institution can greatly outweigh the costs.

But educational institutions are not the only potential recipients

of benefits within a municipality. There are many other "institutional" cable telecommunications applications in areas which include but are not limited to public libraries, energy management for the city, law enforcement, fire departments, hospitals, and businesses.[8] There are many worthwhile applications and possibilities within a municipality and competition among sectors is very real. Sometimes there are other educational institutions in the area. Thus, a college or university wishing to succeed in getting its "fair share" of the pie must play the game and stay on top of franchising developments in its service area.

But, what is the role of the Institutional Researcher in the cable franchising arena? The first item on the agenda is keeping abreast of cable franchising activity in the institution's service area and keeping the institution's executives informed about the development and the potential. The second role might be researching what other campuses in the area or in similar situations are doing or have done with cable. The bottom line is knowing where the cable franchising activity is and what its potential is for the university or college.

Instructional Television Fixed Service (ITFS)

Instructional Television Fixed Service (ITFS) is an instructional broadcasting system whereby signals are distributed on a special microwave band to one or more fixed receiving points. The frequencies used are reserved and allocated by the FCC for

exclusive formal or informal instructional use. Researching the topic of telecommunications is terribly important: knowing what other educational institutions have done or are planning is key. One needs to know how many ITFS channels remain available in a service area for allocation by the FCC.

But what are the uses of ITFS? Offerings include courses at off-campus locations, on-the-job training for high technology workers, as well as continuing education for engineers, physicians, and other professionals.

One of the burning issues surrounding ITFS seems to be the notion of "use it or lose it". Several private corporations have put pressure on the FCC to deallocate ITFS channels and release them for other uses.[9] Corporations such as Microband and Contemporary Communications charge that ITFS channels are underutilized by educational organizations. Indeed, "in 1980 the FCC published a notice that it intended to put some of the channels reserved for ITFS to other uses. However, it has not yet made a final decision on whether or how to do that."[10] The problem for educational institutions is that, once the station frequencies are reallocated, they cannot be reclaimed. They're gone. If institutions of higher education want to hang on to this resource, they will have to move quickly and decisively.

Institutional Researchers should, as a first step, determine whether there are any ITFS channels left for which the college may

apply and, if so, work with their Deans of Continuing Education to explore the market potential of course delivery at off-campus locations. ITFS is particularly suited for delivery of instruction to remote sites and this typically falls within the scope of responsibilities of Deans of Continuing Education. An example of a marketing research effort in this area is a survey seeking the level of interest local engineering firms and other businesses might have in using such on-site instruction to upgrade the technical skills of their staffs.

Teleconferencing

In the private sector, particularly, there is a growing demand for teleconferencing services, especially considering the high cost of business travel. Universities with teleconferencing facilities might serve this need, as well as the internal need of faculty and staff, to tap into national conferences when travel funds are limited. Although demand and revenue potential exist for this technology (e.g., hotel chains like Holiday Inns, Inc. and Sheraton Inns, Inc. have begun to add teleconferencing to the list of conference services), the start-up costs of a video teleconferencing link are not trivial. Careful market research is necessary before the required large capital outlay is committed. At California State University, Los Angeles, the presence of a satellite receiving dish and a microwave uplink (negotiated through a local cable franchising agreement) makes teleconferences an attractive and cost effective direction toward which to move.

While not a reality today, most of the necessary components are in place. This makes the large, up-front capital outlay for teleconferencing unnecessary. Again, teleconferencing might be of greatest interest to a Dean of Continuing Education, in whose area one often finds the inclination and seed money to start academically non-traditional projects.

Combining Internal Communications

While not strictly a telecommunications technology, there exists terrific potential for universities to combine their voice, video, and data communications lines through the use of low cost digital switching networks. Most, if not all, institutions face rising telephone costs each year. Furthermore, the almost unilateral move toward greater access to campus computers, coupled with the development of low cost digital switches, present colleges with a unique choice. Rather than build and maintain separate data communications lines, telephone lines, and video communications lines to offices and classrooms, campuses can buy systems which "share" the communications line but serve these several purposes. Many businesses have found that it is cost effective to replace their phone systems with multi-function systems offered by private vendors. Sometimes such systems can use existing lines with modifications at the terminal points. Thus, all offices that currently are wired for phones potentially are wired already for data communications for computer terminals. Ironically, institutions that have been slow in moving toward computers or

private phone systems may have the greatest potential for cost savings that today's systems could not offer a year ago. This has occurred because institutions that moved quickly into computing already have made substantial commitments to separate data and voice communications systems.

Admittedly, while investigations in these areas are off the beaten path of topics for Institutional Researchers to investigate, what President or executive level officer would eschew a plan to save the institution hundreds of thousands of dollars in operating expenses? If Institutional Research is to serve the function of providing better decision-making information, then it needs to address all, not just some, of the decisions that are being made in the college's operation. While we all routinely and dutifully collect extensive data concerning the sex and ethnicity of our students, how many critical decisions ride on knowing this information? In fact, there is little that an institution can do in the short term about these exogenous variables. Shouldn't we be spending more of our time on the immediate plans, opportunities, and decisions before the institution?

The Role of Institutional Research in Telecommunications

The following directions have been alluded to in the forgoing discussion, and are summarized here. This is not meant to be an exhaustive list; rather, it is meant to suggest some initial avenues an Institutional Research Director might wish to explore.

The first service that an IR office could perform for its campus is conducting an inventory of existing telecommunications equipment and talent. Identifying faculty or individuals who have expertise in this field is an important step because they already have a good feel for what is available and what is being done locally. In short, resource people can save a lot of leg work. The next step is tracking the cable television franchising activity in the institution's service area. If franchises are up for bid in an institution's service area, it generally means you are too late. The time to get involved is when the city council is developing the RFP (request for proposals). The payoff to the institution is immediate and tangible -- equipment, broadcasting studios, and channels on the system.

Another role for Institutional Research is conducting market research in the form of community assessment studies. Such research should seek to determine demand for teleconferencing facilities, on-site video courses for businesses, and educational programming, to name a few. Deans of Continuing or Extension Education should be consulted early in the process since many of the new uses for telecommunications pertain directly to their programs.

Many IR directors are heavily involved in computing on their campuses. One of the new technologies is digital communications, which allows voice, data, and video transmission on the same

communication lines. The potential for cost savings to the institution is becoming more and more of a reality, but it is not necessarily a reality for every institution. Careful thought and investigation is required in order to discover where the savings might lie.

Yet another possible role for the enlightened researcher is serving on a task force or committee charged with planning and/or policy making for the development of telecommunications. Development in this area is increasingly becoming a hot issue on many campuses. It behooves the Institutional Researcher to stay ahead and on top of "hot" issues. Such long-range planning committees may wield the real power for development of these technologies at the institution. But one is rarely appointed to such groups without demonstrating that he or she is knowledgeable about the topic. At the risk of sermonizing, the best advice is: do your homework.

These are just a few of the ways in which an Institutional Researcher can become critically involved in this rapidly developing field of technology. But it is only a suggested start. Many directions are not applicable to specific institutions. For example, those in rural areas with firmly established cable service are out of luck in the cable franchising arena: nothing is up for grabs. Still, the agenda is large and the possibilities for promoting the college's interests are virtually limitless.

Conclusion

There is a multitude of technological developments in telecommunications that present both challenges and potential to institutions of higher education. The vitality of an Office of Institutional Research is directly related to its ability to assist in helping an institution realize this potential. This discussion will have succeeded in its purpose if it has provided a starting point in helping institutions realize the potential of telecommunications technology, and the critical role this technology can serve in accomplishing institutions' missions.

REFERENCES

1. Information Pamphlet: "TAGER Television Network: Bringing Higher Education to Your Place of Business". Association for Higher Education of North Texas, Richardson, Texas, 1981.

2. Mills, Ralph, "Articles of Operation For the Los Angeles Basin Extended Education Television Network of the CSU". Unpublished Report, Long Beach, California State University System, September 1982.

3. Stearns, Jennifer, A Short Course in Cable. Office of Communication, United Church of Christ, 1981, p.2.

4. Ibid., p.7.

5. Brenda Maddox reports, "American Survey: Cable Television", The Economist. June 20, 1981, p.26.

6. Getlin, Josh, "Council Besieged by Cable Lobbyists". Los Angeles Times, August 3, 1982, pp. 1, 3, 14, 15.

7. Baus, F. (editor), Cable Television 1980: Status and Prospect for Higher Education. The Association for Higher Education of North Texas, Richardson, Texas, 1980.

8. Gordon, Jeffrey L., "A Review of Municipal and Institutional Cable Telecommunication Applications". A Harron Communications Report, Los Angeles, 1981.

9. Scully, Malcolm, "FCC May Turn Over Instructional Channels to Pay-TV Operators", The Chronicle of Higher Education, March 23, 1983, p.7.

10. Ibid., p.7

11. Bowen, C. and Ayvazian, B., et al., "Institutional Network Design For the City of Boston", a report by Kalba Bowen Associates, Inc. for Cablevision Systems Boston Corporation, 1981, p.34.

APPENDIX A

Education Service Applications[11]

- Interconnection of Schools with the Library
- Video channel to transmit educational materials from central origination center to the individual schools for Teacher Training and Staff Development
- Teleconferencing for school administrators
- Channel to transmit audio-visual materials, films and tapes to classrooms
- Video surveillance for security, monitoring of hallways, school buildings and campuses
- Systemwide attendance monitoring program
- Specialized instructional programs to classrooms
- Distribute programming to specific audience on the subscriber network (e.g., handicapped, bilingual, homebound instruction, adult education, GED courses)
- Centralize data files and catalogs of instructional resources
- Interconnection of Higher Education campus buildings including dormitories to serve voice, data, text, and video delivery.
- Electronic mail/message switching on larger campuses.
- Data/Word processing centralization and consolidation on campus
- Movement of video instruction from building to building or from campus to satellite campus
- Energy management services
- Traditional cable entertainment for dormitories
- Service campus computers/tie together computer facilities from one institution to another
- Use existing university/college studio facilities for local access production